Warburg, Paul Moritz
The discount system in
Europe

61st Congress, 2d Session | SENATE | Document No. 402

NATIONAL MONETARY COMMISSION

The Discount System in Europe

BY

PAUL M. WARBURG

Washington : Government Printing Office : 1910

61st Congress, 2d Session | SENATE | Document No. 402

NATIONAL MONETARY COMMISSION

The Discount System in Europe

BY

PAUL M. WARBURG

Washington : Government Printing Office : 1910

NATIONAL MONETARY COMMISSION.

THE DISCOUNT SYSTEM IN EUROPE.

By Paul M. Warburg.

If banks were to keep, in cash, all the money deposited with them, business would come to a standstill and a crisis would ensue. If banks were to lend to those who apply for loans all the money on deposit with them, a general panic and collapse would follow a short period of overstimulation. Between these two extremes lies the middle course, the finding of which is the problem, and its practice the art of banking.

No mathematical rule can state the correct proportion between reserves and demand obligations. The proper solution of this question depends in each country on its varying political and economic conditions and on its financial system. This general principle, however, may be safely laid down: with the present system of immense deposits payable on demand, and, by right, payable in gold, at the option of the payee, only that structure is safe and efficient which provides for effective concentration of cash reserves and their freest use in case of need, and enables the banks, when necessary, to turn into cash a maximum of their assets with a minimum of disturbance to general conditions. In this respect recent events

have made it clear that our system is an unqualified failure. It is now generally acknowledged, even by those who were formerly most unwilling to concede it, that the end of 1907 witnessed one of the most impressive victories of the central bank system. More specifically, it was a victory of the "discount system" over the system of cash advances, because the central bank is only a component part, though a most vital one, of the discount system. A close analysis of the discount system, on which Europe's entire financial structure rests, therefore may be timely and interesting.

I.

What is the essence and the object of "discounts?"

The original transaction, from which discounts finally develop, is an advance; it is either an advance in cash, or an advance in kind, i. e., the postponed payment for goods received. As evidence of this advance, and as an instrument on which to sue in case of default, the promissory note was created. So long as this note retains this primitive form and function it is of comparatively little value to the financial system of a nation. It represents nothing but a handy way of expressing an individual contract between two parties, embodying the acknowledgment of having received a temporary advance and the promise to pay it back.

Similarly, primitive part ownership in a business meant an individual contract, entailing a definite locking up of cash, inasmuch as such a contract could not be sold except after prolonged negotiation and search for a new partner. But gradual evolution led to the creation of

the corporation, and the unsalable part ownership was transformed into bonds or stocks, for which important and well-regulated markets insured a ready sale.

A modern financial household is inconceivable without the adoption of such system of mobilizing permanent investments of this character. We are so accustomed to this phase of economic development that we find it difficult to conceive how comparatively recent an achievement this device is. Only a few, however, realize that we have stopped halfway. Although we in America have mobilized our permanent investments, our promissory notes, or temporary investments, still retain their primitive form, while Europe has not only mobilized its permanent investments, but has in addition mobilized its temporary investments by changing the promissory note, or "bill," into a "bill of exchange" and by creating large discount markets where these "bills" can be "exchanged" freely at any time.

"Discounts" represent—or, like our promissory notes, ought always to represent—temporary indebtedness which is to be paid off by the liquidation of the business transaction for the carrying out of which the loan was incurred. A bill may be drawn for cotton while it is being harvested, or while it is in transit for Europe, or while it is being manufactured into yarn, or while the merchant that purchased the finished article continues to owe the manufacturer therefor, or possibly even while the finished article is being shipped back to the same country from which the raw product originally came. To bridge each of these periods a long bill might

properly be drawn by the various parties who, each in turn, handle the goods on their way from their original state to their place of final distribution. The length of the bill will depend on the underlying transaction; in England, France, and Germany it varies, as a rule, between two and four months, the vast majority of such paper being issued for three months.

With us the promissory note is, generally, one-name paper, while in Europe single-name paper is looked upon with distrust and is scarcely purchased at all by the banks. The European banker believes in having several signatures on the bill that he buys, thus securing more than one guaranty. Furthermore, additional signatures are evidence of the legitimate character of the paper and show that the money was taken for a temporary transaction, not for permanent investment. However, there are certain stages during the process of manufacture when the producer is not yet able to sell the bill on his prospective customer; or there may be good reasons why a business man will prefer not to divulge the name of his customers. For such and similar cases the European banks or bankers either allow overdrafts (cash advances) or else they permit the customer to draw on them a sixty or ninety day bill (whichever may fit the case) which, when accepted by the banks or bankers drawn upon, the customer can then sell at the ruling discount rate wherever and whenever he desires to do so.

Through the acceptance or indorsement of the merchant's note by the bank or banker the promissory note—

from being a dead instrument and a nonliquid asset—becomes a liquid asset, part and parcel of the system of tokens of exchange which serve as a substitute for money or as auxiliary currency.

The old promissory note is nothing but the evidence of a commercial credit, the granting of which entails a material business risk and must remain an individual transaction only to be concluded by the few who happen to be well acquainted with the issuer of the note and are willing to take the hazard of granting that particular credit. Through the addition of the banker's signature the question of the maker's credit is eliminated and the note, instead of being a mere evidence of an advance, is transformed into a standard investment, the purchase and sale of which will be governed only by the question of interest. This investment commands the broadest possible market.

Acceptances are given by European banks and bankers mainly for three kinds of drafts: the documentary bill, the commercial credit bill, and the finance bill.

The documentary bill is probably the most important of these three. If an American merchant buys coffee in San Paolo, he will generally pay for it by opening for the shipper a documentary credit in Europe; that is to say, the American purchaser makes an arrangement with the European banker, by which the latter agrees to accept, let us say, a three-months' bill drawn on him with shipping documents attached, covering a certain shipment of coffee, the amount to be drawn being the equivalent of the amount due by the American purchaser to the South

American shipper. The shipper will have no difficulty in selling to a bank in San Paolo his bill drawn on a first-class European banking house, and thus will promptly secure the money due him for the goods sold. The local bank in San Paolo will buy the bill without hesitation (if the shipper is not of the very best standing, the bank will demand that the letter of credit against which the bill is drawn be produced) because it knows that it need only send this foreign bill to England, Germany, or France, as the case may be, where, owing to the extensive discount market in these countries, it can immediately rediscount the bill, thus securing repayment in cash for the amount invested. Indeed, if the Brazilian bank prefers to do so, it can at the moment of shipment, by cabling to Europe, fix the discount rate at which the bills will be discounted upon their arrival in Europe.

When the bill reaches Europe, the drawee puts his acceptance on it, and having thus obligated himself to pay the bill when due, the documents are in most cases released and sent to the American purchaser of the goods, who opened the credit with the European bank. Of course, the American purchaser pays a commission to the European banker for the service rendered. The compensation depends on the standing of the purchaser and in part on the question of whether or not the documents are to be released upon acceptance (the American purchaser obligating himself to put the bank in funds before the bill falls due), or whether or not the documents are only to be given up by the accepting bank against cash payment by the purchaser. It may be said that the average compensation

for such acceptance credit is between a quarter of 1 per cent up to three-quarters of 1 per cent for three months, according to the conditions of the case. The majority of all shipments of merchandise, particularly those of raw material, are everywhere "financed" in this way by documentary bills on Europe. It is interesting to note right here that no matter how good may be the credit of the American purchaser or of any American bank, whose acceptance the purchaser may offer to the shipper in China, South America, or Europe, no shipper in such countries will, as a general rule, take the acceptance of an American bank or banker, because the American bill has no ready market, while the European bill is of very easy sale. It is impossible to estimate how large a sum America pays every year to Europe by way of commissions for accepting such documentary bills, and the other bills with which we shall now deal, but the figures run into many millions. This annual tribute to Europe resulting from our primitive financial system is not merely waste of money, but reflects upon the dignity of a nation of the political and economic importance of the United States.

Next in importance to the documentary bill is the two or three months' bill drawn on a bank or banker as a commercial credit granted by the acceptor to the customer. This transaction is a comparatively simple one. It means that the European banker permits his customer, whether residing in the banker's own country or abroad, to draw on him at two or three months' sight, with the understanding that the customer will put the accepting banker in funds before the bill falls due, so that the

drawee will not be called upon to advance any cash. He merely gives his signature to an acceptance, which the customer sells under discount, employing in his business the cash thus realized. The privilege of renewing the bill at maturity is often agreed upon at the outset, and the use to which the customer may safely and legitimately put the money realized from such a credit will in part depend on this feature of the arrangement between banker and customer.

Large business firms will, as a rule, have such accommodation at their disposal in several countries and they will draw against their credits on such countries as have the lowest discount rate for the time being. They may use all foreign credits at the same time when the interest rate at home is higher than the rates ruling abroad, and, conversely, they may at times cover all their foreign credits and use only the financial accommodation offered at home, if, for the time being, the home rate is lower than the rates abroad.

The vast majority of these commercial credit bills are drawn without collateral, but there are many instances where the drawer of the bill gives security to the acceptor by the pledge of his own bills receivable or of claims against his customers or of merchandise or similar collateral.

The total volume of bills representing commercial credits given by one country to any other is relatively unimportant as compared to the amount of documentary bills issued, but large numbers of such bills are drawn by the home customer on the home banker, especially in France and Germany.

In England, bank and bankers generally avoid accepting long bills for home customers, whom they prefer to accommodate by cash advances, but they accept very largely for out-of-town customers. The joint stock banks in England make it a rule to accept only against collateral, while important private banking firms and banks, which often make accepting their exclusive business, grant uncovered credits to a very large extent. In France and Germany no line of demarcation of this kind exists; banks, large and small, and private bankers as well, accept with or without collateral, according to their own best judgment. The aggregate amount that a firm in any of these countries will accept must, of course, bear a certain relation to its own resources. But this proportion differs according to the character of the general business done by such firm. A bank doing an extensive general banking business will accept to the extent of a part of its capital only, while banks or bankers devoting themselves exclusively to the business of accepting will accept an aggregate amount representing many times their own capital.

Since the rate for a three-months' cash advance is very much higher than the discount rate for three-months' bills, it is nearly always more advantageous for the customer to draw on the banker and to pay the commission for acceptance and, in addition, the European stamp tax, rather than to pay the rate of interest charged for a three-months' cash advance.

This heavy difference between the discount rate and the rate for cash advances most eloquently illustrates the

different valuation applied by the European banker to an investment of easy sale—the discount—as compared to one that locks up cash for even the comparatively short time of three months in a nonliquid asset.

Finally we must mention the so-called finance bill.

Some finance bills are drawn and accepted within the same country, while some are issued in one country and drawn on another. The first class is drawn by home brokers on banks or bankers against stock-exchange collateral, which, for the time being, it is cheaper to carry by an acceptance credit than by a cash advance. But there is generally some discrimination against finance bills, as the idea prevails in the banking community that discounts ought to be based on temporary commercial or industrial transactions and not on undigested securities. The central banks in general absolutely refuse to buy such finance paper, and, as the prejudice against local finance paper is even stronger than that against foreign-born finance paper, the amount of such paper issued within the boundaries of each nation is comparatively small.

The foreign finance bill is drawn by a bank or banking firm in one country on a bank or banking firm in the other country, either with or without collateral. It is drawn in order to profit by the difference between the interest rate in the country where the bill is issued and the discount rate in the country on which the bill is drawn. A great many of these bills are drawn on France, where the interest rate is generally lowest, and on England, which, as a rule, has indeed a somewhat higher rate of interest than

France, but which, on the other hand, is a more liberal acceptor, and finally on Germany. At certain periods the largest amount of such bills probably originates in the United States, being drawn chiefly on independent European banks or bankers against stock exchange collateral. Very substantial sums, however, are drawn without collateral by American firms on their own branches in Europe. These so-called "house bills," which were very popular in the past, have during recent years met with a good deal of antagonism on the part of the European discounters, and in consequence are not used so freely as they were in years gone by.

The most regular customer in drawing finance bills is Russia, whose bankers, owing to the comparatively high rate of interest generally ruling in that country, almost constantly use whatever acceptance credits foreign bankers are willing to place at their disposal, the collateral generally being Russian commercial paper.

II.

There are, then, two primary kinds of bills in use in Europe—the one drawn by the producer, manufacturer, or trader on his respective purchaser and accepted by the latter, and the other the bill drawn on and accepted by a bank or a banker.

Let us now consider how these bills are discounted in Europe. While methods differ in the various European countries, the result in all cases is the same, and, as we are chiefly interested in results, it will be preferable not to cloud the question by going into too much detail respecting the various usages, but rather to state the main principles.

Stated very generally, and fully bearing in mind that there are exceptions to the rule, it may be said that the bulk of the bills drawn on mercantile firms go to the banks or bankers direct from their customers, and it may also be said that these bills do not circulate very freely in the open market, while the bills accepted by banks and bankers are freely sold and circulate freely in the open market.

There are three kinds of purchasers of discounts in all important financial centers: One is the central bank of each country; the second is the banking community at large, which means banks, bankers, and brokers, who form the regular investors; the third is the irregular investor within and without the country.

The relationship between the central bank and the discount market is a most important one. While in normal times only a small proportion of the business is done by the central bank, the existence of this bank is all-important to the whole financial structure, because even if a bank makes it a rule not to rediscount with the central bank and in its general business keeps independent of this institution, the fact remains that in case of need it can nevertheless rediscount with the central bank every legitimate bill, both bankers' or mercantile acceptance, so that every legitimate bill represents a quick asset, on the realization of which every bank or banker can always rely. Consequently no investor, bank, banker, private capitalist, or financial institution will ever hesitate to buy good bills. Furthermore, there will not be in critical times any rush to sell good bills, as everybody in these countries knows that there is no better and safer investment, because for no other

investment is there an equally reliable market. It is this confident reliance that creates the enormous discount market in modern financial economies and which renders it possible for untold millions of discounts to change hands daily, sometimes without any change whatever of rate or else with fluctuations of only one-sixteenth or one-eighth of 1 per cent per annum. The literal meaning of "credit" is confidence. Our whole structure is based on credit, or confidence, and not on cash. Unless this confidence is absolute—and it can not be absolute under an admittedly defective system—the whole edifice is unsafe.

Another factor which helps to strengthen this confidence and to render the system perfect is the existence of strict and uniform laws concerning the issuance, the indorsement, and the collection of such paper, and particularly regulating the right to "protest" and promptly to sue the maker, the indorser, and the acceptor.

Finally, it is necessary for the development of a vast discount market that there be established a system of the freest exchange of money all over the country, rendering possible an easy collection of bills everywhere.

The central-bank system of the various countries has been fully dealt with in separate articles, and we may therefore confine ourselves to stating only the general outlines of this system as far as it relates to the discount market.

It is one of the main duties and privileges of the government banks to buy legitimate paper, with bankers' acceptances or bankers' indorsements. As the government banks from time to time buy this paper, the volume

of their circulating notes, which they issue in payment, increases, while, on the other hand, when they collect this paper at its maturity and thus reduce their holdings of discounts their outstanding circulation decreases. This means that they expand or contract according to the requirements of trade, because discounts represent progressive stages in the process of commerce and industry. However, this is not a merely automatic process, for when those entrusted with the management of the central bank see the necessity of exercising a restraining influence on the business community, they raise the rate at which the bank will discount, and in this they are generally followed by the other banks of the country. The government bank's discount rate, which is uniform for everybody, is, as a rule, so much higher than that of the general banks, and the restrictions as to the character of the paper which the government bank can take directly are so much more rigid than the requirements of the commercial banks, that in normal times the bulk of the business is done by the general banks and bankers. Only when the demand for money increases, does the rate of the general banks begin to approach that of the government bank, but when this happens the government bank, as a rule, raises its rate, so as to maintain its margin over that of the general banks.[a]

The government banks consider themselves more or less as custodians of the national reserve, ready to take an active part in the nation's business only in times of emergency. The distinction should, however, be carefully

[a] Some of the government banks at times establish a private discount rate, lower than the official bank rate. We shall, however, not enlarge upon this point in order not to complicate the question unduly.

observed between the abnormal crisis and what we may call the normal emergency, arising periodically in consequence of certain economic changes, like crop movements or the particular requirements for special industries at fixed periods, which, as experience shows, subside as regularly as they occur. When these normal emergencies arise, the central banks do not ordinarily raise their rate, but, for a time, meet all the requirements at the usual, or at a very slightly increased, rate and allow their circulation to increase with the result that the reserves go down. When the government banks anticipate, however, that more than a normal emergency will have to be dealt with, they successively raise the rate in order to protect the reserve and to force liquidation, and in order to deter all branches of industry from entering upon far-reaching obligations.

Each government bank has a very decided interest in keeping its gold holdings as large as possible and in preventing the gold from leaving the country. If an augmented demand for money and credit accommodation increases the amount of notes outstanding, the government bank, by raising its rate, purposes not only to encourage a general contraction of business and to force the general banks of the country to contract, but also to attract foreign money into the country by the inducement of the higher interest return.

Most of the central banks in normal times accumulate large amounts of foreign bank paper. This is done for a two-fold purpose: First, in order to withdraw funds from the home market at a time of ease, thus creating a reserve, secondly, for the purpose of warding off withdrawals of

85520—10——2

gold by use of the foreign bills when foreign exchange rates approach the gold exporting point.

The relationship of the central bank and of the general banks to the discount market differs somewhat in the various countries. In France and Germany, where the big banks have taken up, more or less, all branches of the banking business, the intercourse between customer and bank on the one hand, and bank and central bank on the other, is a pretty direct one. While a large business is still done by brokers and consequently in the open market, a majority of the transactions is carried on directly between customer and bank and bank and central bank.

In England the various branches of business have, so far, been kept more strictly separated. The investment business in England is largely done through brokers. There are large check banks doing exclusively a deposit account business; there are certain firms devoting themselves almost exclusively to the flotation of loans, either international or domestic; certain other firms doing exclusively a business of acceptance (for documentary or covered or uncovered credits, as explained above); still other firms doing almost exclusively foreign exchange business, while certain large companies and private firms devote themselves entirely to the discount business; and finally there are the bill brokers, doing an intermediary business between the customer, the banks, and the discount companies.

The enormous amount of bills held by the discount companies and bill brokers in England is to a very large extent carried by them through loans on call from the banks. The banks regulate the average plus and minus of daily demands over daily maturities, to a large degree,

by calling or increasing these call loans or else by buying or selling discounts. If, on balance, money is called from the discount companies or bill brokers, short bills will go to the Bank of England. In France and Germany, where the big banks have less hesitation in rediscounting freely with the central bank, the organization of discount companies and bill brokers is eliminated, and in order to settle the daily balances, short bills are sent to the central bank directly by them.

It may safely be said that in normal times the big banks in Europe do not rediscount their long paper with the central bank. For in such times maturing paper and money on call takes care of the daily demands made upon them, and if the demand reaches larger dimensions they send their short maturities for discount and collections to the central bank. It is a sign of somewhat abnormal conditions and a signal for banks and central banks to exercise caution, if the bills discounted by the general banks with the central bank gradually change from short maturities to bills having a long time to run. It is of interest to know that the average life of all bills taken by the German Reichsbank in 1907 was thirty-two days, and of those taken by the Banque de France twenty-six days. The Reichsbank's investment in discounts was 13.8 per cent of the total of all discounts in circulation in Germany during that period; the Banque de France held 12.5 per cent of the total French circulation of discounts. Similar statistics concerning the holdings of the Bank of England are not available.[a]

[a] On December 31, 1908, the Reichsbank held in German bills 1,032,000,000 marks; of these, 44 per cent were payable within fifteen days, 17.4 per cent within sixteen to thirty days, 24.8 per cent within thirty-one to sixty days and 13.9 per cent within sixty-one to ninety days.

Not only do banks and bankers invest in discounts, but financial institutions, industrial corporations, private firms, and individuals do likewise. Instead of keeping all their idle money on deposit, they invest a certain proportion in paper drawn on banks and indorsed by banks or discount companies, thereby giving stability to the whole financial structure. This is in striking contrast with conditions as they exist in this country, where unemployed money is to far too large a degree deposited with banks and trust companies, with the result that this idle money, which must earn interest, is finally piled up in the large money centers, especially in New York, and is there lent out on the stock exchange in the shape of call loans, forming an element of danger for the whole structure.

Moreover, the discount system plays a most important rôle as an equalizer between nations. Money flows where it can earn the best return, provided it can there be invested with safety and with a confident expectation that the investment can easily be resold and the proceeds of the sale easily collected.

If England has a private discount rate of, let us say, 4 per cent, and if, at the same time, there is in France a discount rate of 2 per cent, it stands to reason that the big French banks and the French public will invest in English bills, and that French money will go to England. The same holds good, of course, as to German, Austrian, Russian, or Scandinavian bills. The French banks would not buy the individual note of an English, German, Austrian, Russian, or Scandinavian merchant whom they do not know, but they do know and can value the acceptance or the indorsement of the foreign banks that offer

and indorse or accept this paper. They would, however, not buy this paper, unless they knew that it could be rediscounted at any time in the home country.

Between the indebtedness of one nation to another and the actual settlement of that debt in gold, there lies, as a buffer, the borrowing power of the banking communities of the respective countries. This buffer with us has proved lamentably weak, because of our lack of a discount system. Because of this lack our bills are practically unsaleable. It is not customary with us for a bank or a banker to indorse and to offer for sale the promissory note which he has purchased, nor is it customary for our banks and bankers to accept bills drawn on them, and so the United States has no American paper to offer which Europe could buy. Therefore when the necessity develops of temporarily attracting foreign money into the United States, there is nothing to fill the gap except our securities at bankruptcy prices and our "finance bills" drawn by our banks and bankers.

That is to say, the American banker, instead of adding his own credit to that of the American merchant or manufacturer and thus using the merchant's signature to legitimize his own demand for accomodation, locks up the unfortunate promissory note and secures for himself an entirely new credit on his own resources, quite independent of the original transaction, instead of simply infusing life into this dead note.

But our bankers' bills inevitably bear a financial character, and therefore will not be regarded as favorably as would be commercial paper; moreover, since the

drawers and, to an even greater extent, the European acceptors are comparatively few, European bankers must at times limit their purchases for fear that they are getting too large an amount of paper drawn, accepted, and indorsed by the same firms.

Moreover, as these bills, drawn, as the case may be, in pound sterling, francs, or marks, normally sell at the same rate of private discount as all the other long bills in the country, the European finds no particular inducement to purchase them. When, therefore, there is an excessive amount of these American bills offered, the consequence is discrimination and, what is worse, a feeling of uneasiness and distrust.

If, instead of this unfortunate method of financing, we could offer American paper drawn in dollars, showing its commercial origin, and indorsed by American banks or banking firms, we could vastly multiply the avenues leading into the vaults of the European banks, and our bills would be well distributed instead of going into a few channels which can so easily be closed, and which, as the past has shown, were very energetically and disastrously closed just at the time of our greatest need.[a]

[a] Our own system being absolutely inelastic, we have become accustomed to use as a substitute the power of our banking community to borrow in Europe. We thus use Europe as an auxiliary financial machine; but we forget that our weight has become so great as to threaten the safety of the European machinery when we are compelled to use it to its utmost capacity in order to provide for our needs. Europe, in sheer self-defense, refuses under those circumstances to let us borrow, and by the simple means of refusing our finance bills renders useless our reserve of elasticity. Thus, instead of securing additional means of assistance at the most critical moment, we find ourselves suddenly forced to dispense with a most important part of our machinery, upon which we were wont to rely in normal times. This is what happened during the panic of 1907, and history will repeat itself, unless we adapt our system to our growth.

What an anomalous and inefficient system which, instead of using the credit of the whole nation—producer's, manufacturer's, and merchant's credit joined to that of the financial institutions—demands that a few banks and banking firms should furnish single-handed the accommodation for a nation of ninety millions of people!

3.

We shall now consider the discount system in its position as the basis of the whole financial structure, and contrast this system with our own.

The European financial system is constructed upon discounts as its foundation; the American system is constructed upon bonds and stocks as its foundation. Bank notes in Europe are issued mainly against bullion and discounts; in the United States mainly against bullion and bonds.

The quick assets held by European banks against their deposits consist of discounts or call loans, largely secured by discounts. The quick assets of American banks—promissory notes being unsaleable and cash reserves being unavailable—are primarily call loans on stock and bond collateral.

In Europe the daily plus and minus of money requirements are adjusted by the use of the discount market—that is to say, in a final analysis, by purchase or sale of bills. (Calling in or putting out money on call where the loans are secured by bills amounts, in effect, to a sale or a purchase of bills.) In a last analysis this means that in Europe attempts to liquidate are primarily appeals to the whole nation to liquidate its temporary com-

mercial investments, the brunt of such liquidation being borne by the entire community, and the pressure being constantly subdivided, every member of the community thus contributing his share.

As a majority of discounts represent goods in process of production or on the way to consumption, liquidation with them primarily expresses itself by a falling off in new production, while the consumer, on the other hand, can not stop consuming and must therefore continue to pay. The brunt is thus borne by the whole nation and adjustment follows without violent convulsions.

In sharp contrast with such a system the attempts to liquidate in the United States are directed primarily at the contractors of stock exchange loans. This means that a comparativley limited number of debtors are called upon to sell their securities. This they can do only by finding new investors, who, as a rule, are at such times comparatively rare, because when acute pressure arises it generally originates in the inability of the investor to purchase because of lack of funds or in his unwillingness by reason of his distrust of the financial situation. The concomitant of this is that those forced to sell securities at such times must offer them at sufficiently reduced prices to bring about an entire change in the attitude of the investor. The difficulty here is that violent reductions of prices in themselves cause distrust, and low prices caused by distrust not only frighten away purchasers but, in addition, unsettle the owners of securities and thus cause them to join the ranks of the sellers. An acute convulsion, therefore, must inevitably follow before the tide can be turned.

In order to bring about relief from strained financial conditions the depositor must be transformed into the investor and foreign money must be attracted into the country. To accomplish either the discount system is the most efficient.

The insurance premium for each transaction is commensurate with the risk of the same. It is for this reason that an even moderately attractive interest rate for discounts in modern countries will attract the foreign capitalist and the home depositor, as both know that an investment in discounts can be realized on at any moment without material sacrifice, and this is at the same time the explanation of the fact that, with our defective and explosive financial system, we must offer tremendous interest rates or our securities at bankruptcy prices in order to attract foreign money or turn the home depositor into an investor in critical times. Everybody knows that under our system convulsions must follow acute strains and must precede a cure, and therefore the average investor waits for the debacle before purchasing. And this attitude in itself accentuates the range of fluctuations, which, under the European system, is far less wide.

Of course, general liquidation in Europe includes a liquidation of securities, just as liquidation in the United States also includes liquidation of commercial paper as it matures. But the difference is that in Europe bills will be the main factor and securities will play a much more subordinate part, while with us just the reverse is true.

A few words ought to be said here about the disastrous effect of our obsolete usury laws.

There does not exist any law fixing the maximum rate of discount in any of the important European states. During the development of the central-bank system attempts have at times been made to keep money rates low by compelling the central bank not to charge more at any time than a given rate. History shows, however, that such attempts have invariably ended in failure, and the fact is now generally accepted that the fixing of a maximum rate kills the efficiency of a modern financial system. Such a system requires elasticity and the theoretical possibility of adapting itself unreservedly to all conditions that may arise. The mere fact that the system provides for such means of free defense so strengthens the whole structure that where no such restrictions exist exorbitant rates are, as a matter of fact, the exception; while in a country like ours, where such restrictions prevail, abnormal conditions become a regular occurrence.

High call rates do not tempt either home or foreign investors, the latter particularly being barred from freely profiting by a high call rate by the fact that rates of exchange for remittances from one country to the other vary constantly, so that, unless the margin of interest can be secured for a fairly long time, at least a month, the profit in interest is not large enough to compensate for the risk of a possible loss in the rate of exchange.

It is obvious that, when European discount rates are higher than 6 per cent, we must be able legally to make time loans at rates exceeding 6 per cent, if we are to protect ourselves. Discount is time money on call, and in a modern community time money—not the call rate—is

the decisive factor in the constant flow of money from one country to the other.

Our usury law prevents the free development of rates for time money and incidentally prohibits the establishment of as wide a time-money market as exists in Europe. Since legally and officially our time-money rates can not exceed 6 per cent, the call rate, which is a fairly unimportant factor in Europe, must become the deciding factor with us. It is a most extraordinary (almost an amusing) fact that these call rates, fluctuating from a fraction of 1 per cent up to the confiscatory rate of 100 per cent and sometimes even more per day, and bringing ruin to the weak, should be the direct consequence of a law aimed at protecting the very people whom it destroys.

Usury laws in Europe, where they exist at all, apply only where the borrower is in dire distress when seeking and accepting a loan, and where the lender knowingly profits by the borrower's helpless situation when exacting usurious rates. Usury can be judged only in the light of the surrounding circumstances; and usury laws in Europe generally apply only to individuals. Our law, which prevents solvent firms of bankers, merchants, manufacturers, or brokers from contracting for money on time at more than 6 per cent, implies not only undignified tutelage, but unsound business judgment. The recent crisis has shown that charging people in need more than 6 per cent is not necessarily taking advantage of them. On the contrary, it would have been a blessing to them, and in many cases their salvation, had they been able to borrow money at an even much higher rate. This unsound and

completely indefensible usury law is, however, the reason why we must have daily settlements on the stock exchange, and why our system must in this respect also be strictly opposed to the systems of Europe.

In England, France, and Germany there exist monthly or half-monthly settlements of stock exchange transactions, and as stock exchange loans run from one settlement to the next the amount of money employed on the stock exchange between settlements remains stationary. If, at the settlement, it develops that commitments on the stock exchange have increased and that a larger amount of money is needed there, so much additional money will under normal circumstances be withdrawn from the bill market and go into the stock exchange. If less money is wanted on the stock exchange, so much more will go into the bill market.

Without entering upon a discussion of the question of cash stock exchange dealings versus stock exchange dealings per settlement (for which, be it said in passing, a suitable method of weekly stock exchange settlements can probably be devised for this country, combined with provisions for proper margining in order to prevent over-stimulation to gambling), we are, for the purposes of this article, interested only in the effect of this method of cash dealings on the whole financial system. An exclusive system of cash dealings brings about the preponderance of the call loan on stock exchange collateral. But for the existence of the seducing call loan, which is one of the gravest dangers and curses of our system, we should have been forced to develop our bill market as a regulator of our

daily money requirements. In that case, instead of seeing the idle money of the whole nation poured into stock exchange loans when trade is inactive—thus unduly stimulating speculation when it should be discouraged—and again withdrawing money from the stock exchanges in order to provide for the business of the whole nation when trade becomes active—thus bringing about anxiety and convulsions on the stock exchange in the face of prosperity—we should have a system based on bills; that is to say, based on the broad foundations consisting of the commerce and trade of the whole nation, and we should then enjoy an almost uniform rate of interest all over the country, gently rising and falling within moderate bounds, instead of the violent fluctuations and unbearable conditions to which we are now subjected.

The aggregate amount invested by a nation in trade and commerce should be and is many times the amount invested in stock exchange loans, which latter represent undigested securities and securities carried for speculative investors. Our way of doing business may be illustrated by two adjoining reservoirs, one small and one very large. The small one represents the stock exchange and contains the call loans; the large one represents the general business of the country, as expressed by commerce and industry. In Europe the small reservoir is regulated by pumping water into it from the large one or by withdrawing water from it into the large one. In this way the outflow and inflow of the large reservoir are scarcely perceptible, and yet there is no difficulty in regulating the small one. With

us, the reverse is done. If there is a shortage of water in the large reservoir we draw on the small one and, in order to increase the water in the large reservoir by perhaps an inch, we empty the small one altogether, or else in order to decrease the amount of water in the large reservoir by an inch, we fill the small one to overflowing.

Moreover, the discount system transforms into one large body of water a network of separate reservoirs, insufficiently connected with each other and each filled or emptied according to local supply or demand. The channel by which they are united is the discount rate, which would apply to bankers' paper alike in San Francisco and New York or in New Orleans and Seattle. It is a mistake to think that the size of a country will render such a system ineffective; for whether water is being withdrawn on one side of the basin and simultaneously added at the other far distant end, the surface of the water will be fairly level on both sides. In order to keep the height of the water within definite limits there is a strong main which brings additional water and a wide outlet to take care of the overflow; this is the function of the central bank. Where there are several faucets and outlets—that is, branch offices of the central bank—the effect may indeed be secured more rapidly and fluctuations in the height of the water will be somewhat smaller; but the equalizing power of the discount rate will remain the same. The benefit of fairly normal interest rates is bound to be reaped under such a system; it is only a question of the degree to which it is possible or desirable to secure this result.

Finally, we must dwell for a moment on the effect of the discount system on the highly important questions of reserves and of elastic note issue.

The central-bank system and the discount system can not be separated; they are absolutely interdependent. The discount system can not exist without a central bank to which it may resort in case of need and, on the other hand, the central bank can not exist without an efficient bank rate—that is, without the means of protecting itself and the nation through its power to influence upward or downward the general interest rates of the country. History has shown that without such power the central-bank system fails.

The central bank must not be so intimately and so directly connected with the nation's general business that it can by its change of policy directly affect individual concerns. Between the central bank and the public there should be, as a buffer, the general banking community of the country, which should use its own credit and its own resources to modify the effect of changes in the bank rate, where the public can not so quickly adjust itself to changed conditions. But the central bank must be able to influence the banking community sufficiently to enable it to regulate the general tendency of the money rates of the country. To achieve this is one of the functions of the discount system. With such a system, and only with such a system, can the most important further development safely be reached, viz, that of dividing the banking reserves of the nation into two kinds of reserves, the cash reserves and what we may call the working reserves.

Working reserves are represented by quick assets easily convertible into cash credits available to meet the demand

obligations of a bank. Under a central bank and discount system these are the main reserves kept by the general banks.

Cash reserves are kept almost exclusively by the central bank, there available to permit the general banks to convert cash credits into actual cash whenever needed.

This system is based on confident and immutable reliance by the banks on the fact that against good and legitimate bills a cash credit is always obtainable at the central bank, and that no one will therefore needlessly withdraw or hoard cash. Capital invested in discounts, though considered as good as cash, yet draws interest, while capital invested in actual cash, besides entailing material risk in the safe-keeping of the same, means a loss of interest. There is therefore no danger that cash withdrawn from one institution by reason of distrust of its solvency will be hoarded instead of being deposited in some other institution and thus finally reverting to the central bank without material delay.

Overstimulation of business, or other economic reasons, may bring about an increased demand for cash at home or an outflow of gold abroad. Such withdrawals of cash the bank will, as we have already seen, meet in various ways. But actual hoarding must be a thing inconceivable in a modern country organized to settle its enormous daily business with a comparatively small amount of actual cash.

To maintain the right proportion between the demand cash obligations of a nation and its holdings of actual cash is a task requiring the minutest study and the most con-

stant care. In Europe this is the function of the central bank, which concentrates its attention and energies almost exclusively on this duty, and which should therefore be kept free from too intimate and direct contact with the general business of the country.

The general banks, on the other hand, organized to be money-making concerns and devoting their energies, as they do, to taking care of the requirements of the general public, can not be expected individually to watch this problem of the cash reserves of the nation. Moreover, such a duty can not possibly be performed by 21,000 competing institutions, which can only protect themselves by attacking one another. There must be one central reserve to which all unemployed cash will inevitably return, and to which everybody can apply, or an acute demand for cash will unavoidably bring forth hesitation to pay in cash, as happened with us during the last crisis. Hesitation in paying cash only increases the drain, which each bank can meet only by drawing on the reserves of the other banks, and if to these unbearable conditions there is added a foolish law (unavoidable under a decentralized system) which, by making it obligatory to keep 25 per cent of the deposits in cash, renders the cash reserves absolutely useless, there can be only one consequence, viz, runs by the public, runs by the banks, hoarding by the banks and by the public alike, and finally a general suspension.

If after a prolonged drought a thunderstorm threatens, what would be the consequence if the wise mayor of a town should attempt to meet the danger of fire by distributing the available water, giving each house owner one pailful?

85520—10——3

When the lightning strikes, the unfortunate householder will in vain fight the fire with his one pailful of water, while the other citizens will all frantically hold on to their own little supply, their only defense in the face of danger. The fire will spread and resistance will be impossible. If, however, instead of uselessly dividing the water, it had remained concentrated in one reservoir with an effective system of pipes to direct it where it was wanted for short, energetic, and efficient use, the town would have been safe.

We have parallel conditions in our currency system, but, ridiculous as these may appear, our true condition is even more preposterous. For not only is the water uselessly distributed into 21,000 pails, but we are permitted to use the water only in small portions at a time, in proportion as the house burns down. If the structure consist of four floors, we must keep one-fourth of the contents of our pail for each floor. We must not try to extinguish the fire by freely using the water in the beginning. That would not be fair to the other floors. Let the fire spread and give each part of the house, as it burns, its equal and insufficient proportion of water. *Pereat mundus, fiat justitia!*

But, to continue the metaphor, the central bank and discount system provides not only for a centralization of reserves and for concerted action in accumulating and in using the same, but it also furnishes the means of reaching and of creating a new supply of water.

Most of the central bank systems provide that a certain amount of bank notes may be issued against discounted bills. It would lead beyond the province of this

article to state in detail to what extent each country requires bank notes to be covered by cash and to what proportion they may be issued against discounted paper. The principle, however, is observed in all countries enjoying a central bank system, that, as all bank notes represent demand obligations payable in cash, the amount of notes not secured by cash must at all times bear a certain safe proportion to the amount of cash held by the central bank.

In calculating the amount of cash required we must add to these unsecured notes the other demand obligations of the central bank, viz, deposits against which cash or bank notes may at any time be demanded, and which must, therefore, be treated as unsecured notes. As the Bank of England keeps a large part of its deposits invested in discounts, and not in actual cash, the same principle applies to it as to the German Reichsbank and the Banque de France, notwithstanding the fact that the Bank of England cannot issue any unsecured notes, while the other institutions named may issue a certain amount of unsecured notes. While the English system lacks the pliability of the German and French methods, and therefore requires more frequent and more energetic adjustment by changes in the bank rate, the main principles are the same in all three countries.

The bulk of the demand obligations of central banks, notes and deposits alike, so far as they are not covered by bullion, must be covered by discounts—that is, by promises to pay in bullion within a short time. They must be covered not by permanent but by temporary investments,

so arranged that a very large amount thereof falls due every day and can thus be used to offset the cash demands made upon the bank. We have already mentioned that the holdings of the central bank consist largely of short maturities. The central bank meets the situation by collecting these as they fall due, keeping down the bank's new purchases by an increase in its rate designed to attract new purchasers of the long paper coming into the market, and at the same time to bring about a curtailment of business. Finally, it increases its circulation and temporarily reduces its reserves.

This means sound elasticity, based on discounts and safely restricted by the proportion maintained between holdings of cash and of discounts.

Elasticity does not mean expansion, but expansion and contraction. Contraction, we are inclined to say, is even more important than expansion. Ability on the part of the central bank in normal times to decrease its holdings of discounts and to increase its reserves, without any material disturbance, is most essential to the system, because without such preparatory work the bank could not safely render assistance when called upon in active or anxious times. But the additional benefit of contraction is that it prevents inflation, with all its dangerous consequences.

This system is elastic not only in its structure; it is elastic also in its operation. This is a most important fact; for each situation must be dealt with on its own merits according to the circumstances of the particular case.

Thus, certain periodic and normal demands for cash, as well as a domestic drain caused by distrust, must be met

by paying out freely. A foreign drain, on the other hand, must generally be met by an energetic increase of rate, while a drain both domestic and foreign must be treated by varying combinations of both methods. The discount and central bank system enables the nation to meet these situations by concerted but varying action adjusted to meet each individual case. Is it credible that in a modern country like ours men should profess to believe that all these emergencies can be met by automatic, iron-clad rules, fixing a definite percentage of reserves and an adjusted scale of taxes, applied without possible discrimination to constantly varying and contrasting conditions, and the whole problem being complicated by the disconcerted action of 21,000 competing banks?

Notes issued against discounts mean elasticity based on the changing demands of commerce and trade of the nation, while notes based on government bonds mean constant expansion without contraction, inflation based on the requirements of the government without connection of any kind with the temporary needs of the toiling nation. Requirements of the Government should be met by direct or indirect taxation or by the sale of government bonds to the people. But to use government bonds or other permanent investments as a basis for note issue is unscientific and dangerous.

If the Panama Canal costs $500,000,000 we shall have $500,000,000 additional currency, whether the nation needs it or not. But what sane reason can be found to make the currency of the nation dependent on whether

or not we build a canal? And why should we have more currency if we decide to build a sea-level canal rather than a lock canal? If we were not so well protected by our immense exporting power, we should suffer even worse and more frequent catastrophes through our system of issuing notes without maintaining a safe proportion between gold-secured and uncovered notes and through our device of a circulation not based on temporary investments and therefore incapable of contraction. There can not be any doubt that a continuance of such a system must prove disastrous. The economic law that bad money always drives out good money can not be safely disregarded, and it is only a question of time when its effect will show itself.

The Aldrich-Vreeland Bill, while only a temporary measure, is an important step in advance, inasmuch as for the first time it admits commercial paper as a basis for note issue; but this measure, even if enacted as a permanent law, can not bring final relief, as the note issues not only remain decentralized, but, so far as based on discounts, are grafted on prior note issues based on bonds. This means that having been forced to stretch a rubber band for so long a time and to such an extent that it has become inelastic, we expect to restore elasticity to this old and frayed band by tying to it a small elastic piece. But by so doing we shall only have lengthened the band, which can never contract within the length which has become inelastic.

If we compare the net results of the discount system with those of the bond-secured system, we find that in Europe

rates of interest fluctuate within comparatively small limits, while the outstanding circulation constantly contracts and expands within wide ranges. With us it is the reverse: The outstanding circulation, once it is issued, remains fairly stationary, while the rates of interest fluctuate violently from 1 to 200 per cent.

The discount system enables the country to concentrate its reserves and to use them freely when needed; it brings about a clear distinction between the working reserves of the general banks and the actual cash reserves needed to protect the circulation of the country. With us such a line of demarcation can not be drawn and our reserves become hopelessly decentralized and prove absolutely unavailable in times of stress.

The discount system recognizes the fact that issuing money and making money are two entirely distinct functions, which are at times antagonistic to each other. It is the duty of the money-issuing bank to restrain the money-making bank when the latter wants to go too far or too fast. Therefore note issuing and general banking are separated in Europe, the power to issue notes being more or less centralized. With us, on the contrary, general-banking power and note-issuing power are lodged in the same banks, and the note-issuing power is not centralized.

In Europe an effective discount rate protects the country from foreign and domestic drains alike, while no such protection exists with us.

The discount system mobilizes the resources of the banks. It turns the bank's most legitimate investment, its commercial paper, into its quickest asset, and by so doing

creates a new means of exchange, available both at home and abroad.

Under our system investments in commercial paper are tantamount to a locking up of funds, which remain fixed assets till they mature.

The discount system establishes a broad market for commercial paper and this market forms the basis of the note issues, and at the same time provides for an easy adjustment of the demand and supply of money, the burden being borne by the whole nation.

Under our system notes are issued against bonds, and the daily adjustment of the demand and supply of money primarily spends itself in an increase or a decrease of call loans on stock-exchange collateral. Contraction and liquidation mean an onslaught on the security market with resultant disturbances. It is a result of the foolish attempt to regulate the big reservoir by means of the small one.

There is an old banking rule that no bank may grant credit on other terms than those on which it receives credit. The truth of this adage is obvious and the extent to which this principle is carried out is the test of safe or unsafe banking.

Safe employment of the millions upon millions deposited with the banks is one of their foremost duties. The European system has adapted itself to this problem. Our system makes really safe banking an impossibility. An American banker invests his deposits in unsalable commercial paper and by so doing invests a call obligation in a time loan, which is bad and unsafe banking. As he is,

however, practically compelled to do business in this way, he must, on the other hand, keep a large amount of assets on call in order to meet the first onrush of his depositors. In spite of the fact proved by our last panic, that, through the faultiness of our system, these call loans can not always be depended on when called and are therefore not as available as cash, it is, nevertheless, the only conservative way in which an American banker can invest a large proportion of his deposit money—unless he buys foreign exchange and thus places his money abroad. Banks have been criticised for placing so much money in stock-exchange loans and the stock exchange has been criticised for absorbing so much money. Neither of them deserves blame. It is our system that has made the stock exchange the clearing house for the money of the whole nation and that has immobilized our commercial paper. It is our system that renders the banker helpless, leaving him to choose between the Scylla of locking up his capital and the Charybdis of adding to the accumulation of call loans on the stock exchange, thus placing further weight on this colossus on glass feet.

The discount system, by creating sound conditions, makes the small bank independent and safe. Under present conditions the small bank with us is dependent in critical times on the assistance of the large institutions and on the arbitrary will of the Secretary of the Treasury, limited as this is by his (very uncertain) ability to help. The central bank, the backbone of the discount system, has everywhere proved a check to plutocratic monopoly.

We can not close this short essay on the discount system without a few words about its historical development.

We are apt to believe, on this side of the ocean, that the European central bank and discount system have existed for centuries, that this system is the natural development of conditions as they exist in those countries, and that it was achieved without those radical changes in existing systems, which with us would be necessary in order to modernize our system.

This is a mistake. As will be seen by the history of the various government banks, published by the Monetary Commission, conditions in almost all the countries now enjoying a centralized note issue, were in former days similar to those which now prevail with us. Aside from the Bank of England and the Banque de France, it is safe to say that all the important central banks have been created within the last forty years. The discount system has been developed to its present importance only within the last sixty years. The immense accumulation of wealth during the last half century, the phenomenal growth of capitalization and of daily transactions, brought about the fullest development of every time and money saving device, such as checks, stocks and bonds, clearing houses, stock exchanges, and produce exchanges.

The mobilization of the promissory note and its development as the fundamental and most essential part of the whole financial structure is probably the most important phenomenon in modern financial evolution. Without it the far-reaching use of credit tokens as substitutes for cash is neither complete nor safe.

It is inconceivable that the United States, a nation that leads the way in industrial progress and that more than any other nation weeds out old machinery and replaces it by the newest appliances, should be either unable or unwilling to modernize thoroughly its financial system and to discard old-fashioned financial machinery, which other peoples have long since thrown upon the scrap heap. We are not invited—at this juncture—to suggest a solution for the problem involved in modernizing the American Currency and Banking System, but are only asked to report the facts.[a] We may, however, state the case in this negative way: The question can not be solved by simply copying one of the European methods; for our prospective system will have to be adapted to our own peculiar conditions. But, irrespective of the shape it may finally assume, any system we adopt will prove ineffective and disastrous, unless it be constructed on bills instead of on bonds, and unless it provides for a concentration of cash reserves and of the power to issue bank notes.

[a] The writer has grappled with this problem in his address entitled "A central bank system and the United States of America." (American Economic Association Publications, Vol. X, No. 1, Papers and Discussions of the Twenty-first Annual Meeting.) To those familiar with his earlier attempts, "Defects and needs of our banking system" (New York Times Annual Financial Review of January 6, 1907), and "American and European banking methods and bank legislation compared" in "The Currency Problem and the present Financial Situation" (The Columbia University Press, 1908), he tenders his apologies for the repetition, unavoidably connected with this attempt to deal with aspects previously covered.